DOC / EPO

INVESTOR IN PEOPLE

PN	-	JP9116564 A 19970502
PD	-	1997-05-02
PR	-	JP19950268499 19951017
OPD	-	1995-10-17
TI	-	NETWORK MANAGEMENT SYSTEM
AB	-	PROBLEM TO BE SOLVED: To reduce the load of a management system with no

deterioration of its management accuracy. SOLUTION: The status signals(sn) showing the operating states of the agent parts constructing the networks LAN-A and LAN-B are outputted to a fault state management device 11 which is connected to both networks. The device 11 has an MIB register 13 which stores the signals(sn) and produces a total status signal S to show the entire operating states of the agents connected to the device 11 based on the contents of the register 13. The signal S is stored in a total status register 14 and then sent to a management device 100 via an SNMP answer part 15.

IN	-	NATSUME AKIHIRO
PA	-	SUMITOMO ELECTRIC INDUSTRIES
IC	-	H04L12/40; G06F13/00

© WPI / DERWENT

TI   -   Network management system - has management apparatus which manages operation of terminal equipments based on representation status signal of terminal that is produces according to operating state of terminal equipment

PR	-	JP19950268499 19951017
PN	-	JP9116564 A 19970502 DW199728 H04L12/40 004pp
PA	-	(SUME) SUMITOMO ELECTRIC IND CO
IC	-	G06F13/00 ;H04L12/40
AB	-	J09116564 The system includes several terminal equipments connected by a bus

through a connector. Each terminal outputs a status signal showing the operating state of the terminal equipment.

-   A failure state management unit (11) outputs a representation status signal of the terminal based on the status signal. A management apparatus manages the operation of the terminal equipments based on the representation status signal.

-   ADVANTAGE - Decreases load of management system without dropping management precision.

-   (Dwg.1/5)·

OPD	-	1995-10-17
AN	-	1997-304853 [28]

© PAJ / JPO

PN	-	JP9116564 A 19970502
PD	-	1997-05-02
AP	-	JP19950268499 19951017
IN	-	NATSUME AKIHIRO
PA	-	SUMITOMO ELECTRIC IND LTD
TI	-	NETWORK MANAGEMENT SYSTEM
AB	-	PROBLEM TO BE SOLVED: To reduce the load of a management system with no

deterioration of its management accuracy.

-   SOLUTION: The status signals(sn) showing the operating states of the agent parts constructing the networks LAN-A and LAN-B are outputted to a fault state management device 11 which is connected to both networks. The device 11 has an MIB register 13 which stores the signals(sn) and produces a total status signal S to show the entire operating states of the agents connected to the device 11 based on the contents of the register 13. The signal S is stored in a total status register 14 and then sent to a management device 100 via an SNMP answer part 15.

I	-	H04L12/40 ;G06F13/00

200312917-3

* NOTICES *

JPO and NCIPI are not responsible for any

damages caused by the use of this translation.

1.This document has been translated by computer. So the translation

may not reflect the original precisely.

2.**** shows the word which can not be translated.

3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] It is a network management system containing two or more

terminal units and the management equipment which manages the

operating state of two or more of said terminal units through a bus. Said

bus has a connection for connecting said each terminal. Said each

terminal Two or more status signals which show the operating state are

outputted. Said connection Said management equipment is a network

management system which manages said two or more terminal units

based on said representation status signal including the fault-condition

management tool which outputs the representation status signal of the

terminal connected to said connection based on said two or more status

signals.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] Especially this invention relates to the network

management system which collects the management information of administration object devices (henceforth an agent), such as a terminal unit, and performs that management about a network management system.

[0002]

[Description of the Prior Art] The network management system is offered conventionally. Drawing 4 is the block diagram showing the configuration of such a network management system. It connects with the management equipment 200 with which two or more network LAN-A, LAN-B, etc. manage a network through Bridges 202a and 202b and a bus 203 with reference to drawing 4 . The agents who constitute each network LAN-A and LAN-B are the status signals S1 and S2 which show the condition of each components and circuit board. -- sn is outputted and it is stored in the status registers 201a and 201b in which the management information (it omits Management Information Base and Following MIB) prepared in the bridges 202a and 202b to which it connects each network is stored.

[0003] Drawing 5 is drawing showing the example of a status signal. With reference to drawing 5, a status signal s1 shows the condition of a power source, s2 shows a fan s condition, s3 shows the condition of a port, and s15 shows the condition of a CPU board. Each status signals s1-s15 have either status value of normal or abnormalities, and this value is inputted into status registers 201a and 201b.

[0004]

[Problem(s) to be Solved by the Invention] The conventional network management system was constituted as mentioned above. Management equipment 200 checked altogether each status signal sn of inside, such as status registers 201a and 201b, in the same rank, the operating state of the agent who constitutes a network was checked, and it judged

whether the network would operate normally.

[0005] In the conventional network management system, management equipment 200 was checking all the status signals from two or more agents to juxtaposition. Since management equipment 200 was checked referring to the contents and the value of a concrete register of each agent s MIB, it had the trouble that the load of management equipment 200 was very large.

[0006] This invention aims at offering the network management system which can lower a load, without having been made in order to cancel the above troubles, and lowering management precision.

[0007]

[Means for Solving the Problem] The network management system concerning this invention contains two or more terminal units and the management equipment which is connected to a terminal unit through a bus and manages that operating state. A bus has a connection for connecting each terminal unit, and each terminal outputs two or more status signals which show the operating state. The fault-condition management tool which outputs the representation status signal of the terminal connected to the connection based on two or more status signals to a connection is formed, and management equipment manages a terminal unit based on a representation status signal.

[0008] Since management equipment grasps the condition of an administration object device with reference to all the status signals from an administration object device like before based on the representation status signal outputted for every administration object device, the load of a managerial system can be lowered without affecting management precision.

[0009]

[Embodiment of the Invention] The gestalt of implementation of this

invention is explained with reference to a drawing below. <u>Drawing 1</u> is·
the block diagram showing the whole network-management-system
configuration concerning this invention, and corresponds to
conventional <u>drawing 4</u> . With reference to <u>drawing 1</u> , the
fault-condition management equipments 11a and 11b are formed instead
of the conventional MIB registers 201a and 201b in the network
management system concerning this invention. Since it is the same as
the case of the former explained by <u>drawing 4</u> about the other part, the
same sign is given to the same section and the explanation is omitted.
[0010] Next, the fault-condition management equipments 11a and 11b
are explained. <u>Drawing 2</u> is the block diagram showing the contents of
the fault-condition management equipments 11a and 11b. With reference·
to <u>drawing 2</u> , fault-condition management equipment 11 includes the
fault-condition Management Department 12 which receives the status
signal (s1, s2 -- sn) from each agent s component parts 21a, 21b, and
21c, circuit boards 22a and 22b, etc. which constitutes LAN-A and
LAN-B. The fault-condition Management Department 12 is connected to
the MIB register 13 in which the status signal from each agent is stored,
and two or more status signals from each agent are stored there. The
fault-condition Management Department 12 checks the value of the
status signal sn in the MIB register 13, creates whole status signal S
which shows an agent s condition connected to the fault-condition
Management Department 12 based on the value, and stores it in the
whole status register 14. Whole status signal S stored in the whole
status register 14 is sent to management equipment 100 through the
SNMP response section (Simple Network Management Protocol) 15.
[0011] Next, the whole status S which the fault-condition Management
Department 12 outputs is explained. <u>Drawing 3</u> is drawing showing the
relation between the contents of the value of the status signal sn stored

in the MIB register 13, and whole status signal S corresponding to it. With reference to <u>drawing 3</u> , when all the values of the status signal sn stored in the MIB register 13 are normal, whole status signal S becomes normal (Healthy).

[0012] For example, the condition s1 of a power source is normal, and, in ten or less cases, the thing of abnormalities will be in a cautions condition (Warning) by one or more pieces in the condition s15 of a fan s condition s2 - SP board.

[0013] When a status signal s1 is [the thing of abnormalities] 11 or more pieces in abnormalities or status signals s2-s15, whole status signal S becomes abnormalities (Fatal).

[0014] Thus, since it was made to output every whole agent status signal S to which the fault-condition Management Department 12 was connected based on the status signal sn from an agent connected to it, a managerial system 100 can know an agent s operating state only by checking one whole status signal S for every agent. A managerial system 100 receives only the log showing the status signal sn of the agent in an abnormal condition from the fault-condition Management Department 12, without paying attention especially for the agent in normal or a cautions condition.

[0015] Consequently, a managerial system 100 can offer the network management system which can perform network management by the small load, without dropping management precision, since the condition of each agent who constitutes a network can be grasped without receiving two or more status signals sn from each agent like before.

[0016] In addition, each status signal mentioned in the above-mentioned example is an example, and it cannot be overemphasized that the condition of a device is judged according to the status signal according to an agent.

[0017] Moreover, each condition of the "normal" in the above-mentioned example, "cautions", and "abnormalities" is an example, and can be freely set up according to each network.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the block diagram showing the whole network-management-system configuration concerning this invention.

[Drawing 2] It is the block diagram showing the whole fault-condition management equipment configuration concerning this invention.

[Drawing 3] It is drawing showing the contents of the whole status signal.

[Drawing 4] It is the block diagram showing the configuration of the conventional network management system.

[Drawing 5] It is drawing showing the contents of the status signal.

[Description of Notations]

11 Fault-Condition Management Equipment

12 Fault-Condition Management Department

13 MIB Register

14 Whole Status Register

15 SNMP Response Section

21 Components

22 Circuit Board